

NOTES ON FISHES FROM THE ISTHMUS OF PANAMA, COLLECTED BY  
DR. J. F. BRANSFORD, U. S. N.

BY THEODORE GILL.

The present article is devoted to an enumeration of fishes collected by Dr. Bransford during a recent survey of the Isthmus. Although small in numbers, the collection is of considerable interest, inasmuch as there are in it several new species, and among them representatives of two genera which have not before been known to be represented in that country. These, for the Isthmus, new generic types, are *Platyæcilus*, hitherto exemplified by a single Mexican species, and *Piabucina*, previously known only from two species found in Guiana and Venezuela.

I have adopted the formulas employed by Dr. Günther, to enable comparisons readily to be made with the descriptions of the new species.

**GوبيUS SOPORATOR.**

Synonymy.

*Gobius soporator*, *Cuv. and Val.*, Hist. Nat. des Poiss., vol. xii. p. 56; *Guich.*, Hist. Cub. por de la Sagra, Poissons, p. 127; *Günther*, Cat. Fishes B. M., vol. iii. p. 26; *ib.* Trans. Zool. Soc. London, vol. vi. p. 388 ("Atl. and Pac. Panama.")

One specimen was obtained at Washington Station.

**CICHLASOMA CÆRULEOPUNCTATA.**

Synonymy.

*Acara cæruleopunctata*, *Kner and Steindacher*, Sitzungsber. d. bayer. Akad. dl. W., 1863, p. 222; *ib.*, Abhandlungen d. bayer. Akad. der W., II. Cl., b. x., p. 16, tab. 2, fig. 3. 1864; *Günther*, Trans. Zool. Soc. London, vol. vi. p. 449, 1868.

A number of specimens were obtained from different localities, viz, Empire Station, February, 1875; Rio Frijoli, March, 1875; and Bahia Soldado, March, 1875.

**PLATYÆCILUS MENTALIS.**

D. 10. A. 9. V. 6. L. lat. 25. L. tr. 7.

Body regularly compressed backwards, and moderately elevated; its greatest depth being in advance of the dorsal fin, and contained three and a half times in the total length, without the

caudal; head less compressed than the body; the width of the interorbital space is less than one-half the entire length of the head; the length is contained three times and a half in the entire length without the caudal; the diameter of the eye considerably exceeds the length of the snout, and equals one-third the length of the head; the dorsal fin is moderate, higher than long, and its origin is about midway between the snout and the middle of the caudal fin; anal fin small; its origin is opposite the middle of the dorsal fin; caudal fin round, equal to the length of the head; its depth at base equals three-fourths the length of the head; the pectoral fin extends considerably beyond the root of the ventral; the ventral does not reach the origin of the anal. The color is a uniform brownish-olive, with no caudal spot; a linear band crosses the chin parallel with the lip; the dorsal has a deep, black, band-like spot near the base crossing the anterior half.

A single female specimen, 65 millimetres long, was obtained from a stream on the Atlantic side of the Isthmus.

Inasmuch as this species agrees with *Platypæcilus maculatus* generically in the position of the ventral fins under the dorsal, and thus differs from all related forms, it appears to be congeneric with it. It, however, differs much in the comparatively elongated body and less number of rows of scales between the dorsal and anal, as well as in other respects.

#### ASTYNAX ÆNEUS.

##### Synonymy.

Tetragonopterus æneus, *Günther*, Proc. Zool. Soc. London, 1860, p. 319; *ib.*, Cat. Fishes B. M., vol. v. p. 326; *Kner and Steindachner*, Abhandl. k. bayer. Akad. W., II. Cl., b. x. p. 46; *Günther*, Trans. Zool. Soc. London, vol. vi. pp. 394, 478.

Numerous small specimens, which would at least have been referred by Mess. Kner and Steindacher to this species, were obtained from Empire Station, Bahia Soldado, and the Rio Frijoli.

#### PIABUCINA PANAMENSIS.

D. 10. A. 12. L. lat. 39. L. trans. 8.

The height of the body equals one-fourth of the length, excluding, and one-fifth of the total, including the caudal; the head enters a little less than three and a half times in the length, exclusive of the caudal; the lower jaw projects slightly beyond the

upper; the supramaxillary extends below the anterior half of the eye; the diameter of the eye equals about three-fourths of the interorbital space, is somewhat greater than the length of the snout, and about one-fourth the length of the head; the middle postorbital about as high as long; the dorsal fin commences nearer the snout than the sinus of the caudal fin, and behind the vertical from the ventrals; caudal emarginated, scaly at its base; the pectoral fin equals about one-fourth the length of the head, and its point is about intermediate between its upper axil and the ventral; ventrals decidedly shorter than the pectorals. The color is yellowish-brown, with a dark lateral band extending from the post-humeral spot to a dark area at the base of the caudal; the dorsal fin has a black spot near the base, which crosses the anterior rays.

Three specimens—an old and young—were collected in the Rio Frijoli, and an adult in another stream emptying into the Atlantic. The two adults were 82 millimetres long.

This species is interesting on account of its western and northern habitat, *Piabucina erythrinoides* having been discovered in Lake Maracaibo, and *Piabucina unitæniata* in British Guiana. The present species is most nearly related to the former, but differs in the smaller scales and otherwise.

#### RHAMDIA BRANSFORDII.

D. I. 6. A. 12.

The head is covered with soft skin above; the adipose fin is long, and enters two and two-thirds times in the total length without caudal; its distance from the dorsal is only equal to half the length of the dorsal; the maxillary barbels extend behind the anus, or the origin of the adipose dorsal, and the outer ones of the mandible beyond the inner axil of the pectorals; the height of the body below the dorsal equals nearly one-fifth of the total length without the caudal; the head forms less than one-fourth of the length without the caudal; the lower jaw is considerably the shorter; the band of intermaxillary teeth is about six times as wide as deep; the eyes are nearly midway between the snout and subopercular margin; and the diameter is contained two and a half times in the width of the interocular space; the dorsal fin is scarcely higher than long; its first spine is quite slender, and equal to about three-fourths of the head's length; the pectoral

spine is half as long as the head; a minute porus axillaris is developed; the posterior rays of the anal fin, when depressed, fall some distance short of the end of the adipose fin; the free portion of the tail is somewhat higher than long; caudal fin forked, with both lobes rounded; the length of the lower is contained five and a half times in the total; the color is a uniform purplish-brown; the dorsal fin lightened by the usual basal cross-band. A single specimen was obtained at Camp Marie Caretta, January, 1875.

The specimen is distinguished from those of *R. Wagneri* described, by the proportions, although it is possible that it may be conspecific with them.

#### LORICARIA URACANTHA.

*Loricaria uracantha*, *Kner and Steindachner*, Abhandl. bayer. Akad. Wiss., II. Cl., b. x., p. 56, taf. 6, fig. 3; *Günther*, Trans. Zool. Soc. London, vol. vi. pp. 393, 478.

Eight specimens were obtained at Empire Station.

#### LORICARIA BRANSFORDI.

D. 1, 7. A. 6. V. 1, 5.

Snout (probably broad?—broken off); eye small, its vertical diameter being about equal to half of the width of the interorbital space; the space itself is flat, and the orbits are surmounted by slight crests; the posterior portion of each orbit has a slight notch tending upwards; (teeth probably small, and numerous in both jaws?); lower side of the head naked; opercula and the marginal scutes of the head with a broad, dense band of nearly equal erectile bristles; scutes of the neck with two obsolete carinae; L. lat. 28; there are six lateral scutes between the pectoral and ventral fins; the scutes of the thorax are polygonal and in irregular rows; those of the belly scale-like—*i. e.*, with convex margins—and arranged in transverse rows, somewhat arched forwards; the two lateral ridges coalesce on the eighteenth lateral shield; the origin of the dorsal fin is nearly above the middle of the base of the ventral fin; the caudal fin is slightly emarginated, with its upper lobe somewhat produced, and with the upper spine somewhat swollen at its basal half, the lower lobe obliquely truncated. The color is yellowish-brown; the fins with their rays only banded or spotted.

A single specimen, somewhat over 130 millimetres long, was obtained at Empire Station. The snout and jaws have been lost, and consequently some important characters require to be ascertained. The species is, however, evidently nearly related to the *Loricaria lima* of Kner, but is distinguished by differences in proportions. I take pleasure in connecting with it the name of the discoverer, Dr. Bransford.

**CHÆTOSTOMUS CIRRHOSUS.**

Synonymy.

*Hypostomus cirrhosus*, Val., Voyage Amér. Mérid. par d'Orbigny, Poiss., pl. 7, fig. 3; *Cuv. and Val.*, Hist. Nat. Poiss., t. xv. p. 511.

*Ancistrus cirrhosus*, Kner and Steindachner, Abhandl. bayer. Akad. Wiss., II. Cl., b. x. p. 61.

*Chætostomus cirrhosus*, Günther, Cat. Fishes B. M., vol. v. p. 247; *ib.*, Trans. Zool. Soc. London, vol. vi. pp. 393, 478.

Two specimens were obtained, one at Camp Marie Caretta, March 27, 1875, and the other at Empire Station.